# Fredrick Engels' Synopsis of Capital

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This is a synopsis of Capital, Volume I, written by Engels in 1868. Upon *Capital*'s release, Engels began constructing a comprehensive summation.

On April 17, 1868, he wrote Marx: "I have a limited time at my disposal and the summarising of your book requires more work than I thought; after all, once having taken up the work, I must do it properly...." Engels' synopsis serves two useful contributions: First, Engels was a far more rapid writer than Marx, and more readable. Second, Engels could distance himself from the massive web of ideas without "losing his place in it", and identify primary points to be made.

Engels could achieve this because he was intimately involved with the production of *Capital*. Marx forwarded sheets to Engels as they were printed; Engels sent back his impressions and thoughts.

This text was published in *Fortnightly Review*. Engels only summarized the first four chapters of Volume I of *Capital*.

NOTE: In the first edition, Volume I was divided into six chapters. Subsequent editions renamed these chapters "parts". The 5th chapter was broken into two parts; so that a total of seven parts resulted. The four chapters summarized by Engels therefore correspond to the first four parts of *Capital* as found today. Also note Marx made additions and alterations to the text in subsequent editions. For example, Marx did not dwell in the 1st chapter/part (Commodities) on value and exchange-value — so Engels' synopsis doesn't deal with that subject, which is today integral to chapter one.

In the Progress Publishers introduction, we find:

The reviews and the synopsis made by Engels are inestimable aids to the study of *Capital*. The contents of *Capital* are given for the greater part in Marx's own words.

The centre of gravity, in the synopsis, as well as in the reviews, lies in the *theory of surplus-value*, the corner-stone of Marx's economic doctrine. Engels summarized Marx's theory of surplus-value with special care, characterizing in detail the historical circumstances in which the relations of capital exploitation spread, the working class made its first steps in the struggle and the first skirmishes took place between labor and capital.

Engels' synopsis that the transition from one category to another is not a freak of reason but the reflection of the real historic process of development. Keeping to the order of Marx's exposition, he shows how, in the course of historic development, capital emerged on the basis of commodity production, how it subordinated to itself the whole of production, how simple co-operation was replaced by manufacture and this, in turn, by machine production.

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# Fredrick Engels' Synopsis of Capital

## Volume One, Book One

## The Process Of Capitalist Production

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## 1. COMMODITIES AS SUCH

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The wealth of societies in which capitalist production prevails consists of *commodities*. A commodity is a thing that has *use-value*; the latter exists in all forms of society, but in capitalist society, use-value is, in addition, the material depository of exchange-value.

Exchange-value presupposes a *tertium comparationis* by which it is measured; labor, the common social substance of exchange-values, to be precise, the *socially necessary labor-time* embodied in them.

Just as a commodity is something twofold: use-value and exchange-value, so the labour contained in it is two-fold determined:

- on the one hand, as definite productive activity, weaving labour, tailoring labour, etc. — "useful labour";

- on the other, as the simple expenditure of human labour-power, precipitated abstract (general) labour.

The former produces use-value, the latter exchange-value; only the latter is quantitatively comparable (the differences between skilled and unskilled, composite and simple labour confirm this).

Hence, the substance of exchange-value is abstract labour and its magnitude is the measure of time of abstract labour. Now, to consider the form of exchange-value.

(1) x commodity a = y commodity b;

The value of a commodity in the use-value of another is its relative value. The expression of the equivalence of two commodities is the simple form of relative value. In the above equation, y commodity b is the *equivalent*. In it, x commodity a acquires it value-form in contrast to its (the commodity's) natural form, while y commodity b acquires, at the same time, the property of direct exchangeability, even in its natural form. Exchange-value is impressed upon the use-value of a commodity by definite historical relations. Hence, the commodity cannot express its exchange-value in its own use-value, but only in the use-value of another commodity. Only in the equation of two concrete products of labour does the property of the concrete labour contained in both come to light as abstract human labour *i.e.*, a commodity cannot be related to the concrete labour contained in itself, as the mere form of realization of abstract labour, but it can be so related to the concrete labour contained in other kinds of commodities.

The equation x commodity a = y commodity b necessarily implies that x commodity a can also be expressed in other commodities, thus:

(2) x commodity a = y commodity b = x commodity c = u commodity d = u commodity e = etc., etc.

This is the expanded relative form of value. Here, x commodity a no longer refers to one, but to all commodities as the mere phenomenal forms of the labour represented in it. But, through simple reversal, it leads to

(3) the converse second form of relative value:

y commodity b = x commodity a

v commodity c = x commodity a

u commodity d = x commodity a

t commodity e = x commodity a

etc., etc.

Here, the commodities are given the general relative form of value, in which all of them are abstracted from their use-values and equated to x commodity a as the materialization of abstract labour; x commodity a is the generic form of the equivalent for all other commodities; it is their universal equivalent; the labour materialized in it represents in itself the realization of abstract labour, labour in general. Now, however,

(4) every commodity of the series can take over the role of universal equivalent, but only one of them can do so at a time, since if all commodities were universal equivalents, each of them would in turn exclude the others from that role.

Form 3 is not obtained by x commodity a, but by the other commodities, objectively. Hence, a definite

commodity must take over for the role — for a time, it can change — and only in this way does a commodity become a commodity completely. This special commodity, with whose natural form the general equivalent form becomes identified, is money.

The difficulty with a commodity is that, like all categories of the capitalist mode of production, it represents a personal relationship under a material wrapping. The producers relate their different kinds of labour to one another as general human labour by relating their products to one another as commodities — they cannot accomplish it without this mediation of things. The relation of persons thus appears as the relation of things.

For a society in which commodity production prevails, Christianity, particularly Protestantism, is the fitting religion.

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## 2. THE PROCESS OF COMMODITY EXCHANGE

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A commodity proves that it is a commodity in exchange. The owners of two commodities must be willing to exchange their respective commodities and, therefore, to recognise each other as private owners. This legal relation, the form of which is the contract, is only a relation of wills, reflecting the economic relation. Its content is given by the economic relation itself. (P.45 [84])

A commodity is a use-value for its non-owner, a non-use-value for its owner. Hence, the need for exchange. But, every commodity owner wants to get in exchange specific use-values that he needs, to that extent, the exchange is an individual process. On the other hand, he wants to realise his commodity as value, that is, in any commodity, whether or not *his* commodity is use-value to the owner of the other commodity. To that extent, the exchange is for him a generally social process. But, one and the same process cannot be simultaneously both individual and generally social for all commodity owners. Every commodity owner considers his own commodity as the universal equivalent, while all other commodities are so many particular equivalents of his own. Since all commodity owners do the same, no commodity is the universal equivalent, and, hence, no commodities posses a general relative form of value, in which they are equated as values and compared as magnitudes of value. Therefore, they do not confront each other at all as commodities, but only as products. (P.47 [86])

Commodities can be related as values and, hence, as commodities only by comparison with some other commodity as the universal equivalent. But only the social act can make a particular commodity the universal equivalent — money.

The immanent contradiction in a commodity as the direct unity of use-value and exchange-value, as the product of useful private labour... and as the direct social materialization of abstract human labour — this contradiction finds no rest until it results in duplicating the commodity into commodity and money. (P.48 [87])

Since all other commodities are merely particular equivalents of money, and money is their universal equivalent, they are related to money as particular commodities to the universal commodity. (P.51 [89])

The process of exchange gives the commodity which it converts into money, not its value, but its value-form. (P.51 [89]) Fetishism (belief in a supernatural power of objects): a commodity does not seem to become money only because the other commodities all express their values in it, but, conversely, they seem to express their values in it because it is money.

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## 3. MONEY, OR THE CIRCULATION OF COMMODITIES

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A. The Measure of Values
(Assuming Gold = Money)

Money, as the measure of value, is the necessary phenomenal form of the measure of value immanent in commodities — i.e., labour-time. The simple, relative expression of the value of commodities in money, x commodity a = y money, is their price. (P.55 [95])

The price of a commodity, its money-form, is expressed in imaginary money; hence, money is the measure of values only ideally. (P.57 [95])

Once the change from value to price is effected, it becomes technically necessary to develop the measure of values further, into the standard of price — i.e., a quantity of gold is fixed, by which different quantities of gold are measured. This is quite different from the measure of values, which itself depends upon the value of gold, while the latter is immaterial for the standard of prices. (P.59 [97-98])

Once prices are expressed in accounting names of gold, money serves as money of account.

If price, as the exponent of the magnitude of a commodity's value, is the exponent of its exchange ratio with money, it does not follow conversely that the exponent of its exchange ratio with money is necessarily the exponent of the magnitude of its value. Assuming that circumstances permit or compel the sale of a commodity above or below its value, these selling prices do not correspond to its value, but they are none the less prices of the commodity, for they are

(1) its value-form money, and (2) exponents of its exchange ratio with money.

The possibility, therefore, of quantities incongruity between price and magnitude of value is given in the price-form itself. That is no defect of this form, but on the contrary makes it the adequate form of a mode of production in which the rule can impose itself only as a blindly-acting law of averages of irregularity. The price-form, however, can also harbour a qualitative contradiction, so that price ceases altogether to be an expression of value.... Conscience, honour, etc., can... acquire the form of commodities through their price. (P.61 [102])

Measurement of values in money, the price-form, implies the necessity of alienation, the ideal pricing implies the actual. Hence, circulation.

## B. The Medium of Circulation

### a. The Metamorphosis of Commodities

Simple form: C - M - C.

Its material content C = C. Exchange-value is alienated and use-value appropriated.

A. First phase: C - M = sale, for which two persons are required, hence the possibility of failure — i.e., of sale below value, or even below the cost of production, if the social value of the commodity changes.

"The division of labour converts the product of labour into a commodity, and thereby makes necessary its further conversion into money."

At the same time, it also make the accomplishment of this transubstantiation quite accidental. (P.67 [108]) But, considering the phenomenon in its pure form, C - M presupposes that the possessor of the money (unless he is a producer of gold) previously got his money through exchange for other commodities; hence, it is not only conversely M - C for the buyer, but it presupposes that he made a previous sale, etc., so that we have an endless series of purchases and sales.

B. The same takes place i the second phase, M - C — i.e., purchase, which is, at the same time, a sale for the other party.

C. The total process, hence, is a circuit of purchases and sales. The circulation of commodities. This is quite different from the direct exchange of products; first, the individual and local bounds of the direct exchange of products are broken through, and the metabolism of human labour is made possible; on the other hand, here it already appears that the whole process depends upon social relations spontaneous in their growth and independent of the actors. (P.72 [112]) Simple exchange was extinguished in the one act of exchange, where each exchanges non-use-value for use-value; circulation proceeds indefinitely. (P.73 [112])

Here the false economic dogma: the circulation of commodities involves a necessary equilibrium of purchases and sales, because every purchase is also a sale, and vice versa — which is to say, that every seller also brings his buyer to market with him.

(1) Purchase and sale are, on the one hand, an identical act of two polarly opposite persons (poles are the two ends of the axis of a sphere); on the other hand, they are two polarly opposite acts of one and the same person. Hence, the identity of purchases and sale implies that the commodity is useless unless it is sold, and likewise that this case can occur.

(2) C - M, as a partial process, is similarly an independent process and implies that the acquirer of money can choose the time when he again converts this money into a commodity. He can wait.

The inner unity of the independent processes C - M and M - C moves in external antitheses precisely because of the independence of these processes; and when these dependent processes reach a certain limit of independence, their unity asserts itself in a crisis. Hence, the possibility of the latter is already

given here.

Being the intermediary in commodity circulation, money is the medium of circulation.

b. The Currency of Money

Money is the medium by which each individual commodity goes into, and out of, circulation; it always remains therein itself. Hence, although the circulation of money is merely the expression of commodity circulation, the circulation of commodities appears to be the result of money circulation. Since money always remains within the sphere of circulation, the question is: how much money is present in it?

The quantity of money in circulation is determined by the sum prices of commodities (money-value remaining the same), and the latter by the quantity of commodities in circulation. Assuming that this quantity of commodities is given, the circulating quantity of money fluctuates with the fluctuations in the price of commodities. Now, since one and the same coin always mediates a number of transactions in succession in a given time, for a given interval of time, we have:

$$\frac{\text{Sum of the prices of commodities}}{\text{Number of moves made by a piece of money}} = \text{Quantity of money functioning as the circulated medium}$$

(P. 80 [120])

Hence, paper money can displace gold money if it is thrown into a saturated circulation.

Since the currency of money only *reflects* the process of commodity circulation, its rapidity reflects that of the change in the form of the commodities, its stagnation, the separation of purchase from sale, the stagnation of social metabolism. The origin of this stagnation cannot, of course, be seen from circulation itself, which puts in evidence only the phenomenon. The philistines attribute it to a deficient quantity of circulating medium. (P.81 [121])

Ergo:

(1) If the prices of commodities remains constant, the quantity of money circulating rises when the quantity of circulating commodities increased or the circulation of money is retarded; and drops vice versa.

(2) With a general rise in the prices of commodities, the quantity of money circulating remains constant if the quantity of commodities decreased or the velocity of circulation increases in the same proportion.

(3) With a general drop in the prices of commodities, the converse of (2).

In general, there is a fairly constant average from which appreciable deviations occur almost exclusively as a result of crises.

c. Coin. Symbols of Value

The standard of prices is fixed by the state, as are also the denomination of the particular piece of gold — the coin, and its coining. In the world market, the respective national uniforms are doffed again (Seigniorage is disregarded here), so that coin and bullion differ only in form. But a coin wears away during circulation; gold, as a circulating medium, differs from gold as a standard of prices. The coin becomes more and more a *symbol* of its official content.

Herewith, the latent possibility is given of replacing metallic money by tokens or symbols. Hence:

(1) small coinage of copper and silver tokens, the permanent establishment of which in place of real gold money is prevented by limiting the quantity in which they are legal tender.

Their metallic content is determined purely arbitrarily by law, and thus their function as coinage becomes independent of their value. Hence, the further step to quite worthless symbols is possible:

(2) paper money — i.e., paper money issued by the state, having compulsory circulation. (Credit money not to be discussed here as yet.)

So far as this paper money actually circulates in place of gold money, it is subject to the laws of money circulation. Only the proportion in which paper replaces gold can be the object of a special law, which is: that the issue of paper money is to be limited to the quantity in which the gold represented by it would actually have to circulate. The degree of saturation of circulation fluctuates, but everywhere experience determines a minimum below which it never falls. This minimum can be issued. If more than the minimum is issued, a portion becomes superfluous as soon as the degree of saturation drops to the minimum. In that case, the total amount of paper money within the commodity world still represents only the quantity of gold fixed by that world's immanent laws, and hence alone representable. Thus, if the amount of paper money represents twice the absorbable amount of gold, each piece of paper money is depreciated to half its nominal value. Just as if gold were changed in its function as the measure of prices, in its value. (P.89 [128])

C. Money

a. Hoarding

With the earliest development of commodity circulation, there develops the need, and the passionate desire, to hold fast the product of C - M, money. From a mere agency of change of matter, this change of form becomes an end in itself. Money petrifies into a hoard; the commodity seller becomes a money hoarder. (P.91 [130])

This form was dominant precisely in the beginnings of commodity circulation. Asia. With further development of commodity circulation, every producer of commodities must secure for himself the nexus rerum, the social pledge-money. Thus, hoards accumulate everywhere. The development of commodity circulation increases the power of money, the absolutely social form of wealth, always ready for use. (P.92 [131]) The urge for hoarding is, by nature, boundless. Qualitatively, or with respect to its

form, money is unrestricted — i.e., the universal representative of material wealth — because it is directly convertible into any commodity. But, quantitatively, every actual sum of money is limited — and, therefore, of only limited efficacy as a means of purchasing. This contradiction always drives the hoarder back, again and again, to the Sisyphus-like (vain) labour of accumulation.

Besides, the accumulation of gold and silver in plate creates both a new market for these metals and a latent source of money.

Hoarding serves as a conduit for supplying or withdrawing circulating money with the continuous fluctuations in the degree of saturation of the circulation. (P.95 [134])

b. Means of Payment

With the development of commodity circulation, new conditions appear: the alienation of a commodity can be separated in time from the realization of its price. Commodities require different periods of time for their production; they are produced in different seasons; some must be sent to distant markets, etc. Hence, A can be a seller before B, the buyer, is able to pay. Practice regulates the conditions of payment in this way: A becomes a creditor, B a debtor: money becomes a means of payment. Thus, the relation of creditor and debtor already becomes more antagonistic. (This can also occur independently of commodity circulation — e.g., in antiquity and the Middle Ages.) (P.97 [135])

In this relation, money functions:

(1) as the measure of value in the determination of the price of the commodity sold;

(2) as an ideal means of purchase.

In the hoard, money was withdrawn from circulation; here, being a means of payment, money enters circulation, but only after the commodity has left it. The indebted buyer sells in order to be able to *pay*, or he will be put up for auction. Therefore, money now becomes the sale's end in itself through a social necessity arising out of the relations of the very circulation process. (Pp.97-98 [136])

The lack of simultaneity of purchases and sales, which gives rise to the function of money as a means of payment, at the same time effects an economy of the circulation media, payments being concentrated at a definite place. The virements (remittance by draft from own account to another) in Lyons in the Middle Ages — a sort of clearing-house, where only the net balance of the mutual claims is paid. (P.98 [137])

Insofar as the payments balance one another, money functions only ideally, as money of account or measure of values. Insofar as actual payment has to be made, it does not appear as a circulating medium, as only the vanishing and mediating form of metabolism, but as the individual embodiment of social labour, as the independent existence of exchange-value, as the absolute commodity. This direct contradiction breaks out in that phase of production and commercial crises that is called a monetary crisis. It occurs only where the progressing chain of payments, and an artificial system of settling them, are fully developed. With more general disturbances of this mechanism, no matter what their origin, money changes suddenly and immediately from its merely ideal shape of money of account into hard cash; profane commodities can no longer replace it. (P.99 [138])

Credit money originates in the function of money as a means of payment; certificates of debt themselves circulate, in turn, to transfer these debts to others. With the system of credit, the function of money as a means of payment again expands; in that capacity, money acquires its own forms of existence, in which it occupies the sphere of large-scale commercial transactions, while coin is largely relegated to the sphere of retail trade. (P.101 [139-40])

At a certain stage and volume of commodity production, the function of money-as-a-means-of-payment spreads beyond the sphere of the circulation of commodities; it becomes the universal commodity of contracts. Rents, taxes, and the like, are transformed from payments in kind into money payments. Cf. France under Louis XIV. (Boisguillebert and Vauban); on the other hand, Asia, Turkey, Japan, etc. (P.102 [140-41])

The development of money into a means of payment necessitates the accumulation of money against the date when payment is due. Hoarding, which, as a distinct form of acquiring riches, vanished as society further developed, again appears as a reserve fund of the means of payment. (P.103 [142])

c. Universal Money

In world trade, the local forms of coin — small coinage, and paper money — are discarded and only the bullion form of money is valid as universal money. Only in the world market does money function to the full extent as the commodity whose bodily form is at the same time the immediate social incarnation of human labour in the abstract. Its mode of existence becomes adequate to its concept. (Pp.103-04 [142]; details p.105 [145])

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The Transformation of Money into Capital

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# Fredrick Engels' Synopsis of Capital

## The Transformation of Money into Capital

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1. The general formula for Capital

2. Contradictions in the general formula

3. The buying and selling of labour-power

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## 1. THE GENERAL FORMULA FOR CAPITAL

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The circulation of commodities is the starting point of capital. Hence, commodity production, commodity circulation, and the latter's developed form, commerce, are always the historical groundwork from which capital arises. The modern history of capital dates from the creation of modern world trade and the world market in the 16th century. (P.106 [146])

If we consider only the economic forms produced by commodity circulation, we find that its final product is money, and the latter is the first form in which capital appears. Historically, capital invariably confront landed property at first as moneyed wealth, the capital of the merchant and the usurer, and even today all new capital first comes on the stage in the shape of money that by definite processes has to be transformed into capital.

Money-as-money and money-as-capital differ, to being with, only in their form of circulation. Alongside C - M - C, the form M - C - M, buying in order to sell, also occurs. Money that describes *this* form of circulation in its movement *becomes* capital, is already capital in itself — i.e., by its destination.

The result of M - C - M is M - M — the indirect exchange of money for money. I buy cotton for 100 pounds sterling and sell it for 110; ultimately, I have exchanged 100 for 110, money for money.

If this process yielded at its outcome the same money-value that was originally put into it — 100 pounds sterling out of 100 — it would be absurd. Yet, whether the merchant realizes 100, 110, or merely 50 for his 100 pounds sterling, his money has described a specific movement quite different from that of commodity circulation, C - M - C. From the examination of the differences in form between this movement and C - M - C, the difference in content will also be found.

The two phases of the process, taken separately, are the same as in C - M - C. But, there is a great difference in the process as a whole. In C - M - C, money constitutes the intermediary, the commodity the starting point and the finish; in this case, the commodity is the intermediary, with money the starting point and the finish. In C - M - C, the money is spent once and for all; in M - C - M, it is merely advanced, it is to be got back again. It flows back to its starting point. Here, therefore, is already a palpable difference between the circulation of money-as-money and money-as-capital.

In C - M - C, money can return to its starting point only through the repetition of the whole process, through the sale of fresh commodities. Hence, the reflux is independent of the process itself. In M - C - M, on the other hand, it is conditioned from the outset by the structure of the process itself, which is incomplete if the return flow fails. (P.110 [149])

The ultimate object of C - M - C is use-value, that of M - C - M exchange-value itself.

In C - M - C, both extremes possess the same definiteness of economic form. Both are commodities, and of equal value. But, at the same time, they are qualitatively different use-values, and the process has social metabolism as its content. In M - C - M, the operation, at first glance, seems tautological, purposeless. To exchange 100 pounds for 100 pounds, and in a roundabout way to boot, seems absurd. One sum of money is distinguishable from another only by its size; M - C - M acquires its meaning, therefore, only through the quantitative difference in the extremes. More money is withdrawn from circulation than has been thrown into it. The cotton bought for 100 is sold, say, for 100 + 10; the process, thus, follows the formula M - C - M', where M' = M + delta-M. [The delta-symbol, actually being a triangle, representing the difference, the change in amount.] This delta-M, this increment, is surplus-value. The value originally advanced not only remains intact in circulation, but adds to itself a surplus-value, *expands* itself — and this movement converts money into capital.

In C - M - C, they may also be a difference in the value of the extremes, but it is purely accidental in this form of circulation, and C - M - C does not become absurd when the extremes are equivalent — on the contrary, this is rather the necessary conditions for the normal process.

The repetition of C - M - C is regulated by an ultimate object outside itself; consumption, the satisfaction of definite needs. In M - C - M, on the other hand, the beginning and the end are the same — money — and that already makes the movement endless. Granted, M + delta-M differs quantitatively from M, but it, too, is merely a limited sum of money; if it were spent, it would no longer be capital; if it were withdrawn from circulation, it would remain stationary as a hoard. Once the need for expansion of value is given, it sexists for M' as well as for M, and the movement of capital is boundless, because its goal is as much unattained at the end of the process as at the beginning. (Pp.111,112 [149-51]) As the representative of this process, the owner of money becomes a capitalist.

If, in commodity circulation, the exchange-value attains at most a form independent of the use-value of commodities, it suddenly manifests itself here as a substance in process, endowed with motion of its own, for which commodity and money are mere forms. More than that, as original value, it is differentiated from itself as surplus-value. It becomes money in process, and as such, capital. (P.116 [154])

M - C - M' appears, indeed, to be a form peculiar to merchant's capital alone. BUt, industrial capital, too, is money which is converted into commodities, and by the latter's sale reconverted into more money. Acts that take place between purchase and sale, outside the sphere of circulation, effect no change in this. Lastly, in interest-bearing capital, the process appears as M - M' without any intermediary, value that is, as it were, greater than itself. (P.117 [155])

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# 2. CONTRADICTIONS IN THE GENERAL FORMULA

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The form of circulation by which money becomes capital contradicts all previous laws bearing on the nature of commodities, of value, of money and of circulation itself. Can the purely formal differences of inverted order of succession cause this?

What is more, this inversion exists only for one of the three transacting persons. As a capitalist, I buy commodities from A and sell them to B. A and B appear merely as simple buyers and sellers of commodities. In both cases, I confront them merely as a simple owner of money or owner of commodities, confronting one as buyer or money, the other as seller or commodity, but neither of them as a capitalist or a representative of something that is more than money or commodity. For A, the transaction began with a sale; for B, it ended with a purchase, hence, just as in commodity circulation. Moreover, if I base the right to surplus-value upon the simple sequence, A could sell to B directly and the chance of surplus-value would be eliminated.

Assume that A and B buy commodities from each other directly. As far as use-value is concerned, both may profit; A may even produce more of his commodity than B could produce in the same time, and vice versa, whereby both would profit again. But otherwise with exchange-value. Here, equal values are exchanged for each other, even if money, as the medium of circulation, intervenes. (P.119 [156-58])

Abstractly considered, only a change in form of the commodity takes places in simple commodity circulation, if we except the substitution of one use-value for another. So far, as it involves only a change in form of its exchange-value, it involves the exchange of equivalents, if the phenomenon proceeds in a pure form. Commodities can, indeed, be sold at prices differing from their values, but this would mean a violation of the law of commodity exchange. In its pure form, it is an exchange of equivalents, hence no medium for enriching oneself. (P.120 [158-59])

Hence, the error of all endeavors to derive surplus-value from commodity circulation. Condillac (P.121 [159]), Newman (P.122 [160]).

But let us assume that the exchange does not take place in a pure form, that non-equivalents are exchanged. Let us assume that each seller sells his commodity at 10 per cent above its value. everything remains the same; what each one gains as a seller, he loses in turn as a buyer. Just as if the value of money had changed by 10 per cent. Likewise, if the buyers bought everything at 10 per cent below value. (P.123 [160-61], Torrens.)

The assumption that surplus-value arises from a rise in prices presupposes that a class exists which buys and does not sell — i.e., consumers and does not produce, which constantly receives money gratis. To sell commodities above their value to this class means merely to get back, by cheating, part of the money given away gratis. (Asia Minor and Rome.) Yet, the seller always remains the cheated one and cannot grow richer, cannot form surplus-value thereby.

Let us take the case of cheating. A sells to B wine worth 40 pounds sterling in exchange for grain worth 50. A has gained 10. But A and B together have only 90. A has 50 and B only 40; value has been transferred but not created. The capitalist class, as a whole, in any country, cannot cheat itself. (P.126 [162-63])

Hence: if equivalents are exchanged, no surplus-value results; and if non-equivalents are exchanged, still no surplus-value results. Commodity circulation creates no new value.

That is why the oldest and most popular forms of capital — merchant capital and usurers' capital — are not considered here. If the expansion of merchant capital is not to be explained by mere cheating, many intermediate factors, lacking here as yet, are required. Even more so for usurers', and interest-bearing, capital. It will later be seen that both are derived forms, and why they occur historically before modern capital.

Hence, surplus-value cannot originate in circulation. But outside it? Outside it, the commodity owner is the simple producer of his commodity, the value of which depends upon the quantity of his own labour, contained in it, measured according to a definite social law; this value is expressed in money of account — e.g., in a price of 10 pounds. BUt this value is not at the same time a value of 11 pounds; his labour creates values, but not self-expanding values. It can add more value to existing value, but this occurs only through the addition of more labour. Thus, the commodity producer cannot produce surplus-value outside the sphere of circulation, without coming in contact with other commodity owners.

Hence, capital must originate in commodity, yet not in it. (P.128 [165-66])

Thus:

the transformation of money into capital has to be explained on the basis of the laws inherent to the exchange of commodities, the exchange of equivalents forming the starting point. Our owners of money, as yet the mere chrysalis of a capitalist, has to buy his commodities at their value, to sell them at their value, and yet at the end of this process, to extract more value than he put into it. His development into a butterfly must take in the sphere of circulation and yet not in it. These are the conditions of the problem. Hic Rhodus, hic salta! (P.129 [166])

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## 3. THE BUYING AND SELLING OF LABOUR-POWER

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The change in value of money that is to be converted into capital cannot take place in that money itself, for in buying, it merely realizes the price of the commodity; and on the other hand, as long as it remains money, it does not change the magnitude of its value; and in selling, too, it merely converts the commodity from its bodily form into its money-form. The change must, therefore, take place in the commodity of M - C - M; but not in its exchange-value, since equivalents are exchanged; it can only arise from its use-value as such — that is, from its consumption. For that purpose, a commodity is required whose use-value possess the property of being the source of exchange-value — and this does exist — labour-power. (P.130 [167])

But, for the owner of money to find labour-power in the market as a commodity, it must be sold by its own possessor — that is, it must be free labour-power. Since buyer and seller as contracting parties are

both juridically equal persons, labour-power must be sold only temporarily — since in a sale, en bloc, the seller no longer remains the seller, but becomes a commodity himself. But then the owner, instead of being able to sell commodities in which his labour is embodied, must rather be in a position where he has to sell his labour-power itself as a commodity. (P.131 [168-69])

For the conversion of his money into capital, therefore, the owner of money must find in the commodity market the free labourer, free in the double sense that as a free man he can dispose of his labour-power as *his* commodity, and that, on the other hand, he has no other commodities to sell, has no ties, is free of all things necessary for the realization of his labour-power. (P.132 [168-69])

Parenthetically, the relation between money owner and labour-power owner is not a natural one, or a social one common to all ages, but a *historical* one, the product of many economic revolutions. So, too, do the economic categories considered up to now bear their historical stamp. To become a commodity, a product must no longer be produced as the immediate means of subsistence. The mass of products can assume commodity-form only within a specific mode of production, the capitalist mode, although commodity production and circulation can take place even where the mass of products never become commodities. Likewise, money can exist in all periods that have attained a certain level of commodity circulation; the specific money-forms, from mere equivalent to world money, presuppose various stages of development; nevertheless, a very slightly developed circulation of commodities can give rise to all of them. Capital, on the other hand, arises only under the above condition, and this one condition comprises a world's history. (P.133 [169-70])

Labour-power has an exchange-value which is determined, like that of all other commodities, by the labour-time required for its production, and hence for its reproduction aa well. The value of labour-power is the value of the means of subsistence necessary for the maintenance of its owner — that is, his maintenance in a state of normal capacity for work. This depends upon climate, natural conditions, etc., and also on the given historical standard of life in each country and for each particular epoch. Moreover, his maintenance includes the means of subsistence for his substitutes — i.e., his children — in order that the race of these peculiar commodity owners may perpetuate itself. Furthermore, for skilled labour, the cost of education. (P.135 [170-72])

The minimum limit of the value of labour-power is the value of the physically indispensable means of subsistence. If the price of labour-power falls to this minimum, it falls below its value, since the latter presupposes normal, not stunted, quality of labour-power. (P.135 [173])

The nature of labour implies that labour-power is consumed only after conclusion of the contract, and, as money is usually the means of payment for such commodities in all countries with the capitalist mode of production, the labour-power is paid for only after it is consumed. everywhere, therefore, the labourer gives credit to the capitalist. (P.137,138 [174])

The process of consuming labour-power is at the same time the process of producing commodities and surplus-value and this consumption takes place outside the sphere of circulation. (P.140 [175-76])

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[The Production of Absolute Surplus-Value]

[Synopsis to Capital Index]

# Fredrick Engels' Synopsis of Capital

## The Production of Absolute Surplus Value

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1. The labour process and the process of producting surplus-value

2. Constant and variable capital

3. The Rate of Surplus Value

4. The working day

5. Rate and mass of surplus-value

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## 1. THE LABOR PROCESS AND THE PROCESS OF PRODUCING SURPLUS-VALUE

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The purchaser of labor-power consumes it by setting its seller to work. This labor-to-produce-commodities at first turns out use-values, and in this property it is independent of the specific relation between capitalist and labourer.... Description of the labor process as such. (Pp.141-49 [177-85])

The labor process, on a capitalist basis, has two peculiarities:

(1) The labourer works under the capitalist's control.

(2) The product is the capitalist's property, since the labor process is now only a process between two *things* purchased by the capitalist: labor-power and means of production. (P.150 [184-85])

But the capitalist does not want the use-value produced *for its own sake*, but only as the depository of *exchange-value*, and especially of surplus-value. Labor, under this condition — where the commodity was a unity of use-value and exchange-value — becomes the unity of the production process and of the process creating value. (P.151 [186])

Thus, the quantity of labor embodied in the product is to be investigated.

Yarn, for example. Let 10 lbs. of cotton be necessary for making it, say, 10 shillings, and instruments of labor — whose wear and tear are inevitable in the spinning, here denoted in brief as spindle share — say, 2 shilling. Thus, there are 12 shillings' worth of means of production in the product — i.e., inasmuch as

(1) the product has become an actual use-value, in this case yarn; and

(2) only the socially necessary labor-time was represented in these instruments of labor.

How much is added to it by the labor of spinning?

The labor process is here viewed from an altogether different angle. In the value of the product, the labors of the cotton-planter, of the spindle-maker, etc., and of the spinner, are commensurable, qualitatively equal parts of general, human, necessary value-creating labor, and therefore distinguishable only qualitatively, and for that very reason quantitatively comparable by the length of time, presupposing that it is socially necessary labor-time, for only the latter is value-creating.

Assumed the value of a day's labor-power is 3 shillings, and that it represents 6 hours of labor, that 1 2/3 lbs. of yarn are made per hour, hence in 6 hours: 10 lbs. of yarn from 10 lbs. of cotton (as above); then 3 shillings of value have been added in 6 hours, and the value of the product is 15 shillings (10 + 2 + 3 shillings), or a shilling and a half per pound of yarn.

But in this case there is no surplus-value. That is of no use to the capitalist. (Vulgar-economic humbug, p.157 [190])

We assumed that the value of a day's labor-power was 3 shillings, because 1/2 working-day, or 6 hours, is incorporated in it. But the fact that only 1/2 working-day is required to maintain the worker for 24 hours does not in any way prevent him from working a whole day. The value of labor-power, and the value it creates, are two different quantities. Its useful property was only a conditio sine qua non; but what was decisive was the specific use-value of labor-power in being the source of more exchange-value than it has itself. (P.159 [193])

Hence, the labourer works 12 hours, spins 20 lbs. of cotton worth 20 shillings and 4 shillings' worth of spindles, and his labor costs 3 shillings: total — 27 shillings. But, in the product there are embodied: four days' labor in the shape of spindles and cotton, and one day's labor of the spinner, in all five days at 6 shillings totalling 30 shillings' value of product. We have a surplus-value of 3 shillings: money has been converted into capital. (P.160 [194]) All the conditions of the problem are fulfilled. (Detail p.160 [194])

As a value-creating process, the labor process becomes a process of producing surplus-value the moment it is prolonged beyond the point where it delivers a simple equivalent for the paid-for value of labor-power.

The value-creating process differs from the simple labor process in that the latter is considered *qualitatively*, and only to the extent that it comprises socially necessary labor-time. (P.161 [195], details p.162 [196])

As the unity of labor process and value-creating process, the production process is the production of commodities; as the unity of labor process and the process of producing surplus-value, it is the process of capitalist production of commodities. (P.163 [197])

Reduction of compound labor to simple labor. (Pp.163-65 [197-98])

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# 2. CONSTANT AND VARIABLE CAPITAL

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The labor process adds *new* value to the object of labor — but, at the same time, it *transfers* the value of the object of labor to the product, thus *preserving* it by merely adding new value. This double result is attained in this manner: the specifically useful qualitative character of labor converts one use-value into another use-value and thus preserves value; the value-creating, abstractly general, quantitative character of labor, however, adds value. (P.166 [199])

E.g. — let the productivity of spinning labor multiply sixfold. As useful (qualitative) labor, it preserves in the same time six-times as many instruments of labor. But it adds only the same new value as before — i.e., in each pound of yarn, there is only 1/6 of the new value previously added. As value-creating labor, it accomplishes no more than before. (P.167 [201]) The contrary is true, if the productivity of spinning labor remains the same, but the value of the instruments of labor rises. (P.168 [201])

The instruments of labor transfer to the product only that value which they lose themselves. (P.169 [203]) This is the case in differing degree. Coal, lubricants, etc., are consumed completely — raw materials take on a new form. Instruments, machinery, etc., transmit value only slowly and by parts — and the wear and tear are calculated by experience. (Pp.169-70 [203]) But the instrument remains continually as a whole in the labor process. Therefore, the same instrument counts as a whole in the labor process, but only partly in the process of producing surplus-value, so that the difference between the two processes is reflected here in material factors. (P.171 [204]) Conversely, the raw material, which forms waste, enters wholly into the process of producing surplus-value, and only partly into the labor process, since it appears in the product minus the waste. (P.171 [205])

But, in no case can an instrument of labor transfer *more* exchange-value than it possessed itself — in the labor process it acts only as a use-value and, hence, can give only the exchange-value that it possessed previously. (P.172 [205-06])

This preserving of value is very advantageous to the capitalist, but costs him nothing. (P.173,174 [205,207])

Yet, the preserved value only re-appears, it was already present, and only the labor process adds new value. That is, in capitalist production, surplus-value, the excess of the product's value over the value of the consumed elements of the product (means of production and labor-power). (Pp.175,176 [208])

Herewith have been described the forms of existence which the original capital value takes on in dropping its money-form, in being converted into factors of the labor process:

(1) in the purchase of instruments of labor;

(2) in the purchase of labor-power.

The capital invested in instruments of labor does *not*, therefore, alter the magnitude of its value in the production process. We call it CONSTANT capital.

The portion invested in labor-power *does* change its value; it produces:

(1) its own value, and

(2) surplus-value — it is called VARIABLE capital. (P.176 [209])

Capital is constant only in relation to the production process specifically given, in which it does not change; it can consist sometimes of more, sometimes of fewer instruments of labor, and the purchased instruments of labor may rise or fall in value, but that does not affect their relationship to the production process. (P.177 [210-11]) Likewise, the percentage in which a given capital is subdivided into constant and variable capital may change, but in any given case, the c remains constant and the v variable. (P.178 [211])

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## 3. THE RATE OF SURPLUS-VALUE

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$$C = £\,500 = \underset{c}{410} + \underset{v}{90}$$

At the end of the labor process in which v is turned into labor-power, we get 410c + 90v + 90s = 590.

Let us assume c consists of 312 raw material, 44 auxiliary material, and 54 wear and tear of machinery — in all 410.

Let the value of *all* the machinery be 1,054.

If this were entered as a *whole*, we would get 1,410 for c on both sides of our calculation; the surplus-value would remain 90 as before. (P.179 [212])

Since the value of c merely re-appears in the product, the value of the product we get differs from the value created in the process; the latter, therefore, equals not c + v + s, but v + s. Hence, the magnitude of c is immaterial to the process of creating surplus-value — i.e., c = 0. (P.180 [213]) This also takes place in practice in commercial accounting — e.g., in calculating a country's profit from its industry, imported raw material is deducted. (P.181 [215]) Cf. Vol.III for the ratio of surplus-value to total capital.

Hence: the rate of surplus-value is s:v, in the above case 90:90 = 100%.

The labor-time during which the labourer reproduces the value of his labor-power — in capitalist or other circumstances — is the NECESSARY LABOR; what goes beyond that, producing surplus-value for the capitalist, SURPLUS-LABOR. (Pp.183,184 [215,217]) Surplus-value is congealed surplus-labor, and only the *form of extorting* the same differentiates the various social formations.

Example of the incorrectness of including c — pp.185-96 [217-29] (Senior)

The sum of the necessary labor and the surplus-labor equals the working-day.

# 4. THE WORKING-DAY

The necessary labor-time is given. The surplus-labor is variable — but within certain limits. It can never be reduced to nil, since then capitalist production ceases. It can never go as high as 24 hours for physical reasons, and, moreover, the maximum limit is always affected by moral grounds as well. But, these limits are very elastic. The economic demand is that the working-day should be no longer than for normal wear-and-tear of the worker. But what is normal? An antinomy results and only force can decide. Hence, the struggle between the working class and the capitalist class for the normal working-day. (Pp.198-202 [231-35])

Surplus-labor in previous social epochs. As long as the exchange-value is not more important than the use-value, surplus-labor is milder — e.g., among the ancients; only where direct exchange-value — gold and silver — was produced, surplus-labor was terrible. (P.203 [235]) Likewise, in the slave states of America until the mass production of cotton for export. Likewise, corvee labor — e.g., in Rumania.

Corvee labor is the best means of comparison with capitalist exploitation, because the former fixes and shows the surplus-labor as a specific labor-time to be performed — Reglement organique of Wallachia. (Pp.204-06 [235-36])

The English Factory Acts are negative expression of the greed for surplus-labor, just as the foregoing was its positive expression.

THE FACTORY ACTS. That of 1850 — (p.207 [239]). 10.5 hours and 7.5 on Saturdays = 60 hours per week. Mill-owners' profit through evasion. (Pp.208-11 [240-43])

Exploitation in unrestricted, or only later-restricted, branches:

— lace industry (p.212 [243])
— potteries (p.213 [244])
— lucifer matches (p.214 [246])
— wall-paper (pp.214-17 [246-48])
— baking (pp.217-22 [248-51])
— railway employees (p.223 [253])
— seamstresses (pp.223-25 [254-56])
— blacksmiths (p.226 [256])
— day and night workers in shifts:
(a) metallurgy and the metal industry
(pp.227-35 [256-63])

These facts prove that capital regards the labourer as nothing else than labor-power, all of whose time is labor-time as far as this is at all possible at a given moment, and that the length of life of labor-power is immaterial to the capitalists. (Pp.236-38 [264-65]) But is this not against the interests of the capitalist? What about the replacement of what is rapidly worn out? The organized slave trade in the interior of the United States has raised the rapid wearing out of slaves to an economic principle, exactly like the supply of labourers from the rural districts in Europe, etc. (P.239 [267]) Poorhouse supply (labor-power

provided by poorhouses). (P.240 [267]) The capitalist sees only the continuously available surplus-population and wears it out. Whether the race perishes — apres moi le deluge. Capital is reckless of the health or length of life of the labourer, unless under compulsion from society... and free competition brings out the inherent laws of capitalist production in the shape of external coercive laws having power over every individual capitalist. (P.243 [270])

Establishment of a normal working-day — the result of centuries of struggle between capitalist and labourer.

At the beginning, laws were made to *raise* working-time; now to lower it. (P.244 [271])

- The first Statute of labourers, 23rd Edward III, 1349, was passed under the pretext that the plague had so decimated the population that everyone had to do more work. Hence, maximum wages and limit of the working-day were fixed by law.

- In 1496, under Henry VII, the working day of field labourers and all artificers continued from 5 a.m. to between 7 and 8 p.m. in summer — March to September — with 1 hour, 1.5 hours and .5 hour, in all 3 hours' break. In winter, it was from 5 a.m. to dark. This statute was never strictly enforced.

- In the 18th century, the *whole* week's labor was not yet available to capital (with the exception of agricultural labor). Cf. controversies of that time. (Pp.248-51 [274-77])

Only with modern large-scale industry was this, and more, achieved; it broke down *all* bounds and exploited the workers most shamelessly. The proletariat resisted as soon as it recollected itself.

The five acts of 1802-33 were only nominal, since there were no inspectors. Only the Act of 18833 created a normal working-day in the four textile industries: from 5:30 a.m. to 8:30 p.m., during which time young persons from 13 to 18 years of age could be employed only 12 hours with 1.5 hours' pauses, children from 9 to 13 years of age only 8 hours, while night work of children and juveniles was prohibited. (Pp.253-55 [278-80])

The relay system and its abuse for purposes of evasion. (P.256 [281])

- Finally, the Act of 1844 — which put women of all ages on the same basis as juveniles. Children limited to 6.5 hours; the relay system curbed. On the other hand, children permitted from 8 years on.

- At last, in 1847, the tens-hours bill forced through for women and juveniles. (P.259 [283]) The capitalists' efforts against it. (Pp.260-68 [283-92]) A flaw in the Act of 1847 led to

- the compromise Act of 1850 (p.269 [292]), which fixes the working day for juveniles and women — 5 days of 10.5 hours, 1 day of 7.5 = 60 hours per week, and that between 6 a.m. and 6 p.m. Otherwise, Act of 1847 in force for children. The exception for the silk industry. (Cf. p.270 [293])

- In 1853, the working-time for children also limited to between 6 a.m. and 6 p.m. (P.272 [294])

- Printworks Act, in 1845, limits almost nothing — children and women can work 16 hours!

- Bleaching and dyeing works, 1860.

- Lace factories, 1861.

- potteries and many other branches, 1863 (under the Factory Act, special acts passed the same year for bleaching in the open air and baking). (P.274 [296-97])

Large-scale industry, thus, at first creates the need for limiting working-time, but it later found that the same overwork has gradually taken possession of all other branches as well. (P.277 [298]

History further shows that the isolated "free" labourer is defenceless against the capitalist and succumbs, especially with the introduction of women's and children's labor, so that it is here that the class struggle develops between the workers and the capitalists. (P.278 [299])

In France, the 12-hour day law for all ages and branches of work was passed only in 1846, (Cf., however, p.253 [278], footernote on the French child labor law of 1841, which was really enforced only in 1853, and only in the Department du Nord.) Complete "freedom of labour" in Belgium. The 8-hour movement in America. (P.279 [301])

Thus, the labourer comes out of the production process quite different than he entered. The labour contract was not the act of a free agent; the time for which he is free to sell his labour-power is the time for which he is *forced* to sell it, and only the mass opposition of the workers wins for them the passing of a law that shall prevent the workers from selling, by voluntary contract with capital, themselves and their generation into slavery and death. In place of the pompous catalogue of the inalienable rights of man, comes the modest Magna Charta of the Factory Act. (Pp.280,281 [302])

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## 5. RATE AND MASS OF SURPLUS-VALUE

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With the rate, the *mass* is also given. If the daily value of one labour-power is 3 shillings, and the rate of surplus-value is 100 per cent, its daily mass = 3 shillings, for one labourer.

I. Since the variable capital is the money expression of the value of all the labour-powers simultaneously

employed by one capitalist, the mass of the surplus-value produced by them is equal to the variable capital multiplied by the rate of surplus-value. Both factors can vary, different combinations thus arising. The *mass* of surplus-value can grow, even with decreasing variable capital, if the rate rises — that is, if the working-day is lengthened. (P.282 [303-05])

II. This increase in the rate of surplus-value has its absolute limit in that the working-day can never be prolonged to the full 24 hours; hence, the total value of one worker's daily production can never equal the value of 24 working-hours. Thus, in order to obtain the *same* mass of surplus-value, variable capital can be replaced by increased exploitation of labour only within these limits. This is important for the explanation of various phenomena arising from the contradictory tendency of capital:

(1) to *reduce* the variable capital and the number of workers employed; and

(2) to produce the greatest possible mass of surplus-value nonetheless. (Pp.283,284 [305-06])

III. The masses of value and surplus-value produced by different capitals, for given value and equally high degree of exploitation of labour-power, are related directly as the magnitudes of the variable components of these capitals. (P.285 [306-07])

This seems to contradict all facts.

For a given society, and a given working-day, surplus-value can be increased only by increasing the number of workers — i.e., the population; with a given number of workers, only by lengthening the working-day. This is important, however, only for *absolute* surplus-value.

It now turns out that not *every* sum of money can be transformed into capital — that a minimum exists: the cost price of a single labour-power and of the necessary instruments of labour. In order to be able to live like a worker, the capitalist would have to have two workers, with a rate of surplus-value of 50 per cent, and yet save nothing. Even with eight, he is still a small master. Hence, in the Middle Ages people were forcibly hampered in transformation from craftsmen into capitalists by limitation of the number of journeymen to be employed by one master. The minimum of wealth required to form a real capitalist varies in different periods and branches of business. (P.288 [309])

Capital has evolved into command over labour, and sees to it that work is done regularly and intensively. Moreover, it compels the workers to do more work than is necessary for their sustenance; and, in pumping out surplus-labour, it surpasses all earlier production systems based upon direct compulsory labour.

Capital takes over labour with the given technical conditions, and at first does not change them. Hence, with the production process considered as a labour process, the worker stands in relation to the means of production not as to capital, but as to the means of his own intelligent activity. But, considered as a process of creating surplus-value, otherwise. The means of production become means of absorbing the labour of others. It is no longer the labourer who employs the means of production, but the means of production that employ the labourer. (P.289 [310]) Instead of being consumed by him... they consume him, as the ferment necessary to their own life-process, and the life-process of capital consists only in its movement as value constantly multiplying itself.... The simple transformation of money into means of production transforms the latter into a title and a right to the labour and surplus-labour of others.

The Production of Relative Surplus-Value

Synopsis to Capital Index

# Fredrick Engels' Synopsis of Capital

## The Production of Relative Surplus-Value

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1. The concept of relative surplus-value

2. Co-operation

3. Division of labour and manufacture

4. Machinery and modern Industry

A. Machinery as Such
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## 1. THE CONCEPT OF RELATIVE SURPLUS-VALUE

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For a given working-day, surplus-labour can be increased only by reducing the necessary labour; this can, in turn, be obtained — apart from lowering wages below value — only by reducing the value of labour, that is, by reducing the price of the necessary means of subsistence. (Pp.291-93 [312-15]) This, in turn, is to be attained only by increasing the productive power of labour, by revolutionizing the mode of production itself.

The surplus-value produced by lenthening the working-day is absolute; that produced by shortening the necessary labour-time, is *relative* surplus-value. (P.295 [315])

In order to lower the value of labour, the increase in productive power must seize upon those branches of industry whose products determine the value of labour-power — ordinary means of subsistence, substitutes for the same, and their raw materials, etc. Proof of how competition makes the increased productive power manifest in a lower commodity price. (Pp.296-99 [316-19])

The value of commodities is in inverse ratio to the productivity of labour — as is also the value of labour-power — because it depends on the price of commodities. Relative surplus-value, on the contrary, is directly proportional to the productivity of labour. (P.299 [319])

The capitalists is not interested in the absolute value of commodities, but only in the surplus-value incorporated in them. Realization of surplus-value implies refunding of the value advanced. Since, according to p.299 [320], the same process of increasing productive power lowers the value of

commodities and increases the surplus-value contained in them, it is clear why the capitalist, whose sole concern is the production of exchange-value, continually strives to depress the exchange-value of commodities. (Cf. Quesnay, p.300 [320])

Hence, in capitalist production, economizing labour through developing productive power by no means aims at shortening the working-day — the latter may even be lengthened. We may read, therefore, in economists of the stamp of McCulloch, Ure, Senior, and tutti quanti, on one page that the labourer owes a debt of gratitude to capital for developing the productive forces, and on the next page that he must prove his gratitude by working in future for 15 hours instead of 10. The object of this development of productive forces is only to shorten the necessary labour and to lengthen the labour for the capitalist.

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## 2. CO-OPERATION

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According to p.288 [309], capitalist production requires an individual capital big enough to employ a fairly large number of workers at a time; only when he himself is wholly released from labour does the employer of labour become a full-grown capitalist. The activity of a large number of workers, at the same time, in the same field of work, for the production of the same kind of commodity, under the command of the same capitalist, constitutes, historically and logically, the starting point of capitalist production. (P.302 [322])

At first, therefore, there is only a quantitative difference compared to the past, when fewer labourers were employed by one employer. But a modification takes place at once. The large number of labourers already guarantees that the employer gets real average labour, which is not the case with the small master, who must pay the average value of labour nonetheless; in the case of small production, the inequalities are compensated for society at large, but not for the individual master. Thus, the law of the production of surplus-value is fully realized for the individual producer only when he produces as a capitalist, and sets many labourers to work at the same time — hence, from the outset, average social labour. (Pp.303-04 [322-24])

Moreover: economy in means of production is achieved through large-scale operation alone; less transfer of value to the product by constant capital components arises solely from their joint consumption in the labour process of many workmen. That is how the instruments of labour acquire a social character before the labour process itself does so — up to this time, merely similar processes side-by-side. (P.305 [325])

The economy in the means of production is to be considered here only insofar as it cheapens commodities and, thus, lowers the value of labour. The extent to which it alters the ratio of surplus-value to the total capital advanced (c + v) will not be considered until Book III. This splitting up is quite in keeping with the spirit of capitalist production; since it makes the working conditions confront the worker independently, economy in the means of production appears to be a distinct operation, which does not concern him and has, therefore, no connection with the methods by which the productivity of the labour-power consumed by the capitalist is increased.

The form of labour of many persons, methodically working together and alongside one another in the same production process, or in related processes, is called co-operation. (P.306 [325]) (Concours des forces. Destutt de Tracy.)

The sum-total of the mechanical forces of individual workers differs substantially from the potential mechanical force developed when many hands act together at one time in the same undivided operation (lifting weights, etc.). Co-operation, from the very start, creates a productive power that is, in itself, a mass power.

Furthermore, in most productive work, mere social contact creates a spirit of emulation which raises the individual efficiency of each, so that 12 workers turn out more work in a joint working-day of 144 hours than 12 workers in 12 distinct working-days, or one worker in 12 successive days. (P.307 [326])

Although many may be doing the same or similar things, the individual labour of each may still represent a different phase of the labour process (chains of persons passing something along), whereby co-operation again saves labour. Likewise, when a building is started from several sides at once. The combined worker, or collective worker, has hands and eyes before and behind and is, to a certain degree, omnipresent. (P.308 [327])

In complicated labour processes, co-operation permits the special processes to be distributed and to be done simultaneously, thus shortening the labour-time for manufacturing the whole product. (P.308 [327])

In many spheres of production, there are critical periods when many workers are needed (harvesting, herring catches, etc.). Here, only co-operation can be of aid. (P.309 [328])

On the one hand, co-operation extends the field of production and, thus, becomes a necessity for work requiring great spatial continuity of the working arena (drainage, road-building, dam construction, etc.); on the other hand, it contracts the arena by concentrating the workers in one work-place, thus cutting down costs. (P.310 [328-29])

In all these forms, co-operation is the specific productive power of the combined working-day, social productive power of labour. The latter arises from co-operation itself. In systematic joint work with others, the worker sheds his individual limitations and develops the capabilities of his species.

Now, wage-labourers cannot co-operate unless the *same* capitalist employs them simultaneously, pays them and provides them with instruments of labour. Hence, the scale of co-operation depends upon how much capital a capitalist has. The requirement that a certain amount of capital be present to make its owner a capitalist now becomes the material condition for the conversion of the numerous dispersed and independent labour processes into one combined social labour process.

In a like manner, capital's command over labour was, up to now, only the formal result of the relation between capitalist and labourer; now it is the necessary prerequisite for the labour process itself; the capitalist represents combination in the labour process. In co-operation, control of the labour process becomes the function of capital, and, as such, it acquires specific characteristics. (P.312 [330])

In accordance with the aim of capitalist production — the greatest possible self-expansion of capital — this control is at the same time the function of the greatest possible exploitation of a social labour process, and, hence, involves the inevitable antagonism between exploiter and exploited. Moreover, control of proper utilization of the instruments of labour. Finally, the connection between the various

workers' functions lies outside them, in capital, so that their own unity confronts them as the capitalist's authority, as an outside will. Capitalist control is, thus, twofold —

1. a social labour process for producing a product;

2. a process of self-expansion of capital —

and in its form despotic. This despotism now evolves its own peculiar forms: the capitalist, just relieved from actual labour himself, now hands over immediate supervision to an organized band of officers and non-coms, who themselves are wage-labourers of capital. In slavery, the economists count these supervision expenses as faux frais; but in capitalist production, they bluntly identify control, so far as it arises from the nature of the social labour process. (Pp.313,314 [332,332])

The leadership of industry becomes the attribute of capital, just as in feudal times the functions of general and judge were attributes of landed property. (P.314 [332])

The capitalist buys 100 individual labour-powers, and gets, in return, a combined labour-power of 100. He does *not* pay for the combined labour-power of 100. When the labourers enter the combined labour process, they already cease to belong to themselves; they are incorporated in capital. Thus, the social productive power of labour appears as the productive power immanent in capital. (P.315 [333])

Examples of co-operation among the ancient Egyptians. (P.316 [333-34])

Primitive co-operation at the beginnings of civilization, among hunting peoples, nomads, or in Indian communities, is based:

(1) on common ownership of the means of production;

(2) on the natural attachment of the individual to the tribe and the primeval community.

The sporadic co-operation in antiquity, the Middle Ages, and in modern colonies is based upon direct rule and violence, mostly slavery. Capitalist co-operation, on the contrary, presupposes the free wage-labourer. Historically, it appears in direct opposition to peasant economy and the independent handicrafts (whether in guilds or not), and in this connection, as a historical form peculiar to, and distinguishing, the capitalist production process. It is the first change experienced by the labour process when subjected to capital. Thus, here at once:

(1) the capitalist mode of production presents itself as a historical condition for the transformation of the labour process into a social process;

(2) this social form of the labour process presents itself as a method of capital labour more profitable by increasing its productivity. (P.317 [335])

Co-operation, as considered so far, in its *elementary* form, coincides with production on a larger scale, but it does not constitute a fixed form characteristic of a particular epoch, of capitalist production, and it still exists today, when capital operates on a large scale without division of labour, or machinery playing an important part. Thus, although co-operation is the basic form of the whole capitalist production, its *elementary* form appears as a particular form alongside its more developed forms. (P.318 [335])

## 3. DIVISION OF LABOUR AND MANUFACTURE

Manufacture, the classic form of co-operation based upon division of labour, prevails from about 1550 to 1770. It arises:

(1) Either through the assemblage of different crafts, each of which performs a detail operation — e.g., vehicle building — whereby the individual craftsman very soon loses his ability to pursue his *whole* handicraft, on the other hand doing his detail work so much better; and thus the process is converted into a division of the whole operation into its component parts. (Pp.318, 319 [336, 337])

(2) Or many craftsmen doing the same or similar work are united in the same factory, and the individual processes, instead of being performed successively by one worker, are gradually separated and done simultaneously by several workers. (Needles, etc.) Instead of being the work of one artificer, the product is now the work of a union of artificers, each of whom performs only a detail operation. (P.319,320 [337,338])

In both cases, their result is a productive mechanism whose organs are human beings. The work retains a handicraft nature; each detail process through which the product goes must be performable by hand; hence, any really scientific analysis of the production process is excluded. Each individual worker is completely chained to a detail function *because* of its handicraft nature. (P.321 [338-39])

In this way, labour is saved — as compared to the craftsman — and this is increased still more by transmission to succeeding generations. Thus, the division of labour in manufacture corresponds to the tendency of former societies to make a trade hereditary. Castes, guilds. (P.322 [339-40])

Subdivision of tools through adaptation to the various partial operations — 500 kinds of hammers in Birmingham. (Pp.323-24 [341])

Manufacture, considered from the standpoint of its total mechanism, has two aspects: either merely mechanical assembly of independent detail products (watch), or a series of related processes in one workshop (needle).

In manufacture, each group of workers supplies another with its raw material. Hence, the basic condition is that each group produces a given quantum in a given time; thus, a continuity, regularity, uniformity, and intensity of labour, of quite a different kind are created than in co-operation proper. Thus, here we have the technical law of the production process: that labour be socially necessary labour. (P.329 [345])

The inequality of the time required for the individual operations makes it necessary that the different groups of workers be of different size and number (in type founding: four founders and two breakers to one rubber). Thus, manufacture sets up a mathematically fixed ratio for the quantitative extent of the several organs of the collective worker, and production can be expanded only by employing an additional multiple of the whole group. Moreover, only after a definite level of production has been reached does it pay to make certain functions independent: supervision, transporting the products from place to place, etc. (Pp.329,330 [346])

Combination of various manufactures into a united manufacture also occurs — but, as yet, it always lacks real technical unity, which arises only with machinery. (P.331 [347-48])

Machines appeared in manufacture at an early date — sporadically — grain and stamping mills, etc., but only as something subordinate. The chief machinery of manufacture is the combined collective worker, who possesses a much higher degree of perfection than the old individual craft worker, and in whom all the imperfections, such as are often necessarily developed in the detail worker, such as perfection. (P.333 [348-49]) Manufacture evolves differences among these detail workers, skilled and unskilled, and even a complete hierarchy of workers. (P.334 [349])

Division of labour:

(1) general — into agriculture, industry, shipping, etc.;

(2) particular — into species and subspecies;

(3) in detail — in the workshop.

The social division of labour also develops from different starting points.

(1) Within the family and the tribe the natural division of labour according to sex and age, plus slavery through violence against neighbors, which extends it. (P.335 [351-52])

(2) Different communities according to location, climate, level of culture, turn out different products which are exchanged where these communities come in contact. (P.49 [87])

Exchange with these foreign communities is, then, one of the chief mens of breaking off the natural association of the community itself through further development of the natural division of labour. (P.336 [352])

Division of labour in manufacture, thus, presupposes certain degree of development of the social division of labour; on the other hand, it develops the latter further — as in the territorial division of labour. (Pp.337,338 [352,353])

For all that, there is always this difference between social division of labour and division of labour in manufacture — that the former produces commodities, whereas in the latter the detail worker does not produce commodities. Hence, concentration and organization in the latter, scattering and disorder of competition in the former. (Pp.339,341 [354,356])

Earlier organization of the Indian communities. (Pp.341,342 [357]) The guild. (Pp.343-44 [358-59]) Whereas in all these there exists division of labour in society, the division of labour in manufacture is a specific creation of the capitalist mode of production.

As in co-operation, the functioning working organism is a form of existence of capital in manufacture as well. Hence, the productive power arising from the combination of labours appears to be the productive power of capital. But, whereas co-operation leaves the individual's mode of working on the whole unchanged, manufacture revolutionizes it, cripples the worker; unable to make a product independently, he is now a mere appendage of the capitalist's workshop. The intellectual faculties of labour disappear as far as the many are concerned, to expand in scope for the one. It is a result of the division of labour in manufacture that the labourers are brought face-to-face with the intellectual potencies of the labour

process as the property of another and as a ruling power. This process of separation — which begins as early as co-operation, and develops in manufacture — is completed in modern industry, which separates science as an independent productive force from labour and presses it into the service of capital. (P.346 [361])

Illustrative quotations. (P.347 [362-63])

Manufacture, in one aspect a definite organization of social labour, is, in another, only a particular method of begetting relative surplus-value. (P.350 [364]) Historical significance ibidem.

Obstacles to the development of manufacture, even during its classical period, are limitations of the number of unskilled workers owning to the predominance of the skilled; limitation of the work of women and children owing to the men's resistance; the insistence on the laws of apprenticeship up to recent times, even where superfluous; continual insubordination of the workers, since the collective worker as yet possesses no framework independent of the workers; emigration of the workers. (Pp.353,354 [367,368])

Besides, manufacture itself was unable to revolutionize the whole of social production, or even merely to dominate it. Its narrow technical basis came into conflict with the production requirement that it had created. The machine became necessary, and manufacture had already learned how to make it. (P.355 [368])

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## 4. MACHINERY AND MODERN INDUSTRY

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A. Machinery as Such

The revolution in the mode of production, starting in manufacture with labour-power, here starts with the instruments of labour.

All fully-developed machinery consists of

(1) the motor mechanism;

(2) the transmitting mechanism;

(3) the tool or working machine. (P.357 [373])

The industrial revolution of the 18th century started with the working machine. What characterizes it is that the tool — in a more or less modified form — is transferred from man to the machine, and is worked by the machine under the operation of man. At the outset, it is immaterial whether the motive power is human or a natural one. The specific difference is that man uses only his own organs while the machine can, within certain limits, employ as many tools as demanded. (Spinning-wheel, 1 spindle; jenny, 12 to 18 spindles.)

So far, in the spinning-wheel, it is not the treadle, the power, but the spindle that is affected by the industrial revolution — at the beginning, man is still motive power and tender at the same time everywhere. The revolution of the working machine, on the contrary, first made the perfecting of the steam-engine a necessity, and then also carried it out. (Pp.359-60 [374-75]; also, pp.361-62 [376-77])

Two kinds of machinery in modern industry: either

(1) co-operation of similar machines (power-loom, envelope-machine, which combines the work of a number of detail workers through the combination of various tools), in this case technical oneness already, through the transmission and the motive power; or

(2) machine system, combination of different detail machines (spinning-mill).

The natural basis for this is the division of labour in manufacture. But, at once, an essential difference. In manufacture, every detail process had to be adapted to the labourer; this is no longer necessary here — the labour process can be objectively dissected into its component parts, which is then left to science, or to experience based upon it, to be mastered by machines. Here, the quantitative ratio of the several groups of workers is repeated as the ratio of the several groups of machines. (Pp.363-66 [378-79])

In both cases, the factory constitutes a big automaton (moreover, perfected to that shape only recently) and this is its adequate form. (P.367 [379]) And its most perfect form is the machine-building automaton, which abolished the handicraft and manufacture foundation of large-scale industry, and thus first provided the consummate form of machinery. (P.369-72 [384-86])

Connection between the revolutionizing of the various branches, up to the means of communication. (P.371 [383])

In manufacture, the combination of workers is subjective. Here, there is an objective mechanical production organism, which the worker finds ready at hand, and which can function only through collective labour: the co-operative character of the labour process is now a technical necessity. (P.372 [386])

The productive forces arising from co-operation and the division of labour cost capital nothing; the natural forces: steam, water, also cost nothing. Neither do the forces discovered by science. But, the latter can be realized only with suitable apparatus, which can be constructed only at great expense; likewise, the working machines cost much more than the old tools. But, these machines have a much longer life and a much greater field of production than the tool; they, therefore, transfer a much smaller portion of value, comparatively, to the product than a tool — and, hence, the gratuitous service performed by the machine (which does not reappear in the value of the product) is much greater than in the case of the tool. (Pp.374,375,376 [387,388,390])

Reduction in cost through concentration of production is much greater in modern industry than in manufacture. (P.375 [388])

The prices of finished goods prove how much the machine has cheapened production, and that the portion of value due to the instruments of labour grows relatively, but declines absolutely. The productivity of the machine is measured by the extent to which it replaces human labour-power. Examples (pp.377-79 [390-92])

Assumed a steam plough takes the place of 150 workers getting and annual wage of 3,000 pounds, this

annual wage does *not* represent all the labour performed by them, but only the necessary labour-power, they also perform surplus-labour, in addition. If the steam plough costs 3,000 pounds, however, that is the expression in money of *all* the labour embodied in it. Thus, if the machine costs as much as the labour-power it replaces, the human labour embodied in it is always much less than that which it replaces. (P.380 [392])

As a means of cheapening production, the machine must cost less labour than it replaces. But, for capital, its value must be less than that of the labour-power supplanted by it. Therefore, machines that do not pay in England may pay in America — e.g., for stonebreaking. Hence, as a result of certain legal restrictions, machines that formerly did not pay for capital may suddenly make their appearance. (Pp.380-81 [393-94])

B. Appropriation of labour-Power Through Machinery

Since machinery itself contains the power-driving it, muscular power drops in value. labour of women and children; immediate increase in the number of wage-labourers through the enrolling of members of the family who had not previously worked for wages. Thus, the value of the man's labour-power is spread over the labour-power of the whole family — i.e., depreciated. Now, four persons instead of one must perform not only labour, but also surplus-labour for capital that one family may live. Thus, the degree of exploitation is increased together with the material exploitation. (P.383 [395])

Formerly, the sale and purchase of labour-power was a relation between free persons; now, minors or children are bought; the workers now sells wife and child — he becomes a slave-dealer. Examples (pp.384-85 [396-97])

Moral degradation. (P.389 [399]) Educational clauses and manufacturers' resistance to them. (P.390 [399-400])

The entrance of women and children into the factory finally breaks down the male worker's resistance to the despotism of capital.

If machinery shortens the labour-time necessary to produce an object, in the hands of capital it becomes the most powerful weapon for lengthening the working-day far beyond its normal bounds. It creates, on the one hand, new conditions that enable capital to do so, and, on the other, new motives for so doing.

Machinery is capable of perpetual motion, and limited only by the weakness and limitation of the assisting human labour-power. The machine that is worn out in 7.5 years, working 20 hours daily, absorbs just as much surplus-labour for the capitalist, but in half the time, as another that is worn out in 15 years working 10 hours daily. (P.393 [404])

The moral depreciation of the machine — by superseding — is in this way risked still less. (P.394 [404-05])

Moreover, a large quantity of labour is absorbed without increasing the investments in buildings and machines; thus, not only does surplus-value grow with a lengthened working-day, but the outlay required to obtain it diminishes relatively. This is more important insofar as the proportion of fixed capital greatly

predominated — as is the case in large-scale industry. (P.395 [405])

During the first period of machinery, when it possesses a monopoly character, profits are enormous — and, hence, the thirst for more, for boundless lengthening of the working-day. With the general introduction of machinery, this monopoly profit vanishes, and the law asserts itself that surplus-value arises, not from the labour supplanted by the machine, but from the labour employed by it — that is, from the variable capital. But, under machine production, the latter is necessarily reduced by the large outlays. Thus, there is an inherent contradiction in the capitalist employment of machinery: for a given mass of capital, it increases one factor of surplus-value, its rate, by reducing the other, the number of workers. As soon as the value of a machine-made commodity becomes the regulating social value of that commodity, this contradiction comes to light, and again drives towards lengthening the working-day. (P.397 [407])

But, at the same time, machinery — by setting free supplanted workers, as well as by enrolling women and children — produces a surplus working population, which must let capital dictate the law to it. Hence, machinery overthrows all the moral and natural bounds of the working-day. Hence, the paradox that the most powerful means of shortening labour-time is the most infallible means of converting the whole lifetime of the worker and his family into available labour-time for expanding the value of capital. (P.398 [408])

We have already seen how the social reaction occurs here through the fixing of the normal working-day; on this basis, there now develops the intensification of labour. (P.399 [409])

At the beginning, with the speeding-up of the machine, the intensity of labour increases simultaneously with the lengthening of labour-time. But, soon the point is reached where the two exclude each other. It is different, however, when labour-time is restricted. Intensity can only grow; in 10 hours, as much work can be done as ordinarily in 12 or more, and now the more intensive working-day counts as raised to a higher power, and labour is measured not merely by its time, but by its intensity. (P.400 [409]) Thus, in 5 hours of necessary and 5 hours of surplus-labour, the same surplus-value can be attained as in 6 hours of necessary and 6 hours of surplus-labour at lower intensity. (P.400 [410])

*How* is labour intensified? In manufacture, it has been proved (Note 159, p.401 [411, footernote 1]), pottery, for instance, etc., that mere shortening of the working-day is sufficient to raise productivity enormously. In machine labour, this was far more doubtful. But, R. Gardner's proof. (Pp.401-02 [411-12])

As soon as the shortened working-day becomes law, the machine becomes a means of squeezing more intensive labour out of the worker, either by greater speed or fewer hands in relation to machine. Examples. (Pp.403-07 [412-16]) Evidence that enrichment and expansion of the factory grew simultaneously therewith. (Pp.407-09 [416-18])

## C. The Whole Factory in Its Classical Form

In the factory, the machine takes care of the proper manipulation of the tool; thus, the qualitative differences of labour developed in manufacture are here abolished; labour is levelled-out more and more; at most, difference in age and sex. The division of labour is here a distribution of workers among the

specialized machines. Here, division is only between principal workers, who are really employed at the tool, and feeders (this is true only for the self-acting mule, scarcely so for the throttle, and still less for the corrected power loom), in addition supervisors, engineers and stockers, mechanics, joiners, etc., a class only outwardly aggregated to the factory. (Pp.411-12 [420])

The necessity for adapting the worker to the continuous motion of an automaton requires training from childhood, but by no means that a worker be any longer chained to one detail function all his life, as in manufacture. Change of personnel can take place at the same machine (relay system), and because of the slight effort required to learn, the workers can be shifted from one kind of machine to another. The work of the attendants is either very simple or is taken over more and more by the machine. None the less, at the beginning, manufacture division of labour persists traditionally, and itself becomes a greater weapon for exploitation by capital. The worker becomes a lifelong part of a detail machine. (P.413 [422-23])

All capitalist production, insofar as it is not only a labour process but also a process for expanding the value of capital, has this in common that it is not the worker who employs the instruments of labour, but vice versa — the instruments of labour employ the worker; but only through machinery does this perversion acquire technical, palpable reality. Through its conversion into an automaton, the instrument of labour itself confronts the labourer, during the labour process, as capital, as dead labour that dominates and sucks dry the living labour-power. Ditto the intellectual powers of the production process as the power of capital over labour.... The detail skill of the individual, pumped-out machine operator vanishes as a tiny secondary thing alongside science, the tremendous natural forces and social mass labour which are embodied in the machine system. (Pp.414,415 [423])

Barracks-like discipline of the factory, factory code. (P.416 [423-24])

Material conditions of the factory. (Pp.417-18 [425-27])

## D. The Workers' Struggle Against the Factory System and Machinery

This struggle, existing since the origin of the capitalist relationship, first occurs here as a revolt against the machine as the material basis of the capitalist mode of production. Ribbon looms. (P.419 [427-28]) Luddites. (P.420 [428-29]) Only later do the workers distinguish between the material means of production and the social form of their exploitation.

In manufacture, the improved division of labour was rather a means of virtually replacing the labourers. (P.421 [429]) (Digression on agriculture, displacement p.422 [430].) But, in machinery, the worker is actually displaced; the machine competes with him directly. Hand-loom weavers. (P.423 [431]) Likewise India. (P.424 [432]) This effect is permanent, since machinery continually seizes upon new fields of production. The self-dependent and estranged form that capitalist production gives the instrument of labour, as against the labourer, is developed by machinery into a thorough antagonism — hence, now the labourer's revolt first against the instrument of labour. (P.424 [432])

Details of the displacement of workers by machines. (Pp.425,426 [433,435]) The machine as a means of breaking the workers' resistance to capital by displacing them. (Pp.427,428 [435-37])

Liberal economics maintains that the machine, displacing workers, at the same time releases capital that can employ these workers. On the contrary, however, every introduction of machines locks up capital, diminishes its variable and increases its constant components; it can, therefore, merely restrict capital's capacity for employment. In fact — and this is what these apologists also mean — in this manner, not capital is set free; but the means of subsistence of the displaced workers are set free; the workers are cut off from the means of subsistence, which the apologist expresses by saying that the machine liberates means of subsistence for the workers. (Pp.429-30 [438-39])

This further development (very good for Fortnightly [the magazine for which this synopsis was ostensibly written]) (pp.431.431-32 [439-41]): the antagonism inseparable from the capitalist employment of machinery do not exist for the apologists, because they do not arise out of machinery as such, but out of its capitalist employment. (P.432 [441])

Expansion of production by machines directly and indirectly, and thus possible increase in number of workers hitherto employed: miners, slaves in cotton states, etc. On the other hand, displacement of Scotch and Irish by sheep to suit the requirements of the woollen factories. (Pp.433,434 [443,444])

Machine production carries the social division of labour much further than manufacture did. (P.435 [444])

E. Machinery and Surplus-Value

The first result of machinery: increasing surplus-value together with the mass of products in which it is embodied and on which the capitalist class and its hangers-on live, thus increasing the number of capitalists; new luxury wants, together with the means of satisfying them. Luxury production grows. Likewise, means of communication (which, however, absorb only little labour-power in the more developed countries) (evidence p.436 [445]) — finally, the servant class grows, the modern domestic slaves, whose material is supplied by the releasing [of workers]. (P.437 [446]) Statistics.

Economic contradictions. (P.437 [446])

Possibility of absolute increase in the mass of labour in one branch of business owning to machines, and the modalities of this process. (Pp.439-40 [449])

Enormous elasticity, capacity for sudden extension of large-scale industry to a high degree of development. (P.441 [450-51]) Reaction upon the countries producing raw materials. Emigration owing to release of workers. International division of labour of the industrial and agricultural countries — periodicity of crises and prosperity. (P.442 [451]) Workers thrown back and forth in this process of expansion. (P.444 [454])

Historical data on this. (Pp.445-49 [455-59])

Displacement of co-operation and manufacture by machinery (and the intermediate stages, pp.450-51 [459-60]) Also, displacement of establishments not run on factory lines, industry branches in the spirit of large-scale industry — domestic industry, an outside department of the factory. (P.452 [461]) In home industry and modern manufacture, exploitation still more shameless than in the factory proper. (P.453

[462]) Examples: London print-shops (p.453 [462-63]), book-binding, rag-sorting (p.454 [463]), brick-making (p.455 [462-63]). Domestic industry: lace-making (pp.457-59 [466-68]), straw plaiting (p.460 [468-69]). Conversion into factory production with achievement of ultimate limit of exploitability: wearing apparel by the sewing-machine (pp.462-66 [470-74]). Speeding-up of this conversion by extension of the compulsory Factory Acts, which put an end to the old routine based upon unlimited exploitation. (P.466 [475]) Examples: pottery (p.467 [475-76]), lucifer matches (pp.468 [476]). Furthermore, effect of the Factory Acts upon irregular work, owing to the workers' habits, as well as to seasons and fashions. (P.470 [478]) Overwork alongside idleness, owing to the seasons, in domestic industry and manufacture. (P.471 [478-79])

Sanitary clauses of the Factory Acts. (P.473 [480-81]) Educational clauses. (P.475 [482-83])

Discharge of workers merely because of age, as soon as they are grown up and no longer fitted for the work, and can no longer live on a child's wages, while at the same time, they have learned no new trade. (P.477 [484-85])

Dissolution of the mysteries, and of the traditional ossification of manufacture and handicraft, by modern industry, which converts the production process into a conscious application of natural forces. Hence, it alone is revolutionary, as against all earlier forms. )P.479 [486-87]) But as a capitalist form, it lets the ossified division of labour persist for the worker, and since it daily revolutionizes the former's basis, it ruins the worker. On the other hand, in this very thing, in this necessary change of activities of one and the same worker lies the requirement of his being as versatile as possible and the possibilities of the social revolution. (Pp.480-81 [487-88])

Need for extending factory legislation to all branches not operated on factory lines. (P.482 ff. [489-ff.]) Act of 1867. (P.485 [493]) Mines, note. (P.486 ff. [495-503])

Concentrating effect of the Factory Acts; generalization of factory production and thus of the classical form of capitalist production; accentuation of its inherent contradictions, maturing of the elements for overturning the old society, and of the elements for forming the new. (Pp.488-93 [498-503])

Agriculture. Here the release of the workers by machines is even more acute. Replacement of the peasant by the wage-labourer. Destruction of rural domestic manufacture. Accentuation of the antithesis between town and country. Dispersion and weakening of the rural labourers, whereas the urban workers are reduced down to a minimum. At the same time robbing the soil: the acme of the capitalist mode of production is the undermining of the sources of all wealth: the soil and the labourer. (Pp.493-96 [504-07])

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# CHAPTER V

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# FURTHER INVESTIGATION OF THE PRODUCTION OF SURPLUS-VALUE

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